By R. S. SHAW, Dean of Agriculture, Michigan Agricultural College



Agricultural Students at Michigan Agricultural Colleke Constructing Tile

tions as follows, under the direction of or pitching bundles of grain. a competent instructor, viz: Fitting It seems desirable to provide for and operating of haying and harvest- this training in a special manner aside ing tools and machinery, the same be- from the regular course, the experiing true in the case of all implements ences of the individual students beinvolved in the cultivation of farm ing so greatly varied. An investigaand horticultural crops. Each student | tion a year or more ago showed that was required to take part in every op- 65 per cent, of the young men enrolleration involved in farm drainage, the ed in the agricultural and forestry same being true in fencing. In addi- courses came from the villages, towns tion to this, training was given in the and cities. feeding, care and management of The regular agricultural course preseason of the year.

the work easiest and most efficiently. | conveniences generally.

RULES

for Extermination of Weeds

By DR. W. J. BEAL

1. The right kind of a man, who will

2. See that all seeds purchased or

grown at home for seed are free from

seeds of weeds. Although often heard,

3. See that threshing machines, hay

racks, grain bags from other farms

are well cleaned before used on the

4. Cook or grind screenings and

5. Send seeds to the agricultural

college, East Lansing, for identifica-

tion, unless they are known to be

ripening seeds. This is especially im-

portant late in the season in case of

all pigweeds, pursiane and others

where the flowers are very small and

are liable to be overlooked and the

seeds ripen before their presence is

7. For meadow or pasture make the

soil very fertile, as most weeds will

then be killed or crowded by the bet-

ter grass and become of little account.

reference to killing the weeds.

feature in certain fields.

clover or rye or buckwheat.

8. Modify the rotation of crops with

9. Make a specialty of hoed or cul-

10. Make soiling crops a prominent

11. Smother weeds with quick grow-

12. Keep some crops growing on the

land from early spring till late au-

tumn-double cropping, i. e., two cul-

tivated crops in one year for barn and.

cellar instead of one for use and one

13. Cultivate thoroughly after a crop

14. Clean up and avoid leaving any

vacant or out of the way places for

15. Where practicable, remove

17. When once begun, continue the

giving no quarter to weeds. This is

the easiest in the long run and the

it is far less expensive and much

ng and thickly seeded crops, like red

6. Strive to prevent weeds from

burn chaff when certain weeds are

these words are too little heeded.

carefully observe and study the kinds

of weeds and their habits, fighting

method.

suspected.

suspected.

tivated crops.

of weeds.

is removed.

royal way.

breeding ground.

16. Keep some sheep.

The first regular organized summer | This training is a prerequisite to school of practical agriculture was the four-year course and must be opened at the Michigan Agricultural procured in this school or elsewhere college June, 1911, and continued before graduation. The work is not throughout the ensuing four weeks. required of a young man properly train-This course is intended to train the hands properly so far as the proper hands properly so far as the proper summer vacations on well operated performance of ordinary farm work is farms, but as a rule he is not given concerned. No formal lectures were an opportunity to experience a variety given, but each student was shown of work as days in succession are how to properly perform such opera- spent in the hay loft mowing back hay

poultry, hogs, sheep, beef cattle, dairy sents an abundance of practical work cattle and horses. In fact the stu- not usually acquired on the farm, such dent was required to put the hand to as blacksmithing, carpentry, operation every operation in progress at this of engines and farm machinery, as well as farm construction, including Great care was exercised in the di- concrete work such as construction of rection given. A student sent to mow foundations, walks, tanks, troughs, out fence corners with a scythe was posts, etc. In addition to this the sturequired first to grind and whet the dent is given work in installation of scythe, and was then instructed how water systems, pipe fitting, plumbing. to take hold properly, swing and do building designs and planning of farm

> a great extent the best mode of fighting it. Certain remedies suggest like quack grass and toad flax, while different treatment is best for narrowleaved dock; and still a different mode of attack may be adopted for crab

grass and purslane. Weeds are annuals, as pigweeds, crab grass, pursiane; biennials as buil thistle and mulleins; perennials, like

quack grass, Canada thistle, ox-eye each to the best advantage, i. e., with Daisy. Will it pay? The annual cost of

successfully fighting a weedy farm of 100 acres in Ontario has been found to be about \$75. Good cultivation in the long run pays a greater profit than slipshod culture. 'It not only kills the weeds, but keeps the soil in condition for securing good crops. It conserves moisture.

Perennial plants cannot gain any if the green leaves are not allowed to appear. The nourishment stored in the root stocks underground will aid the plant to send up slender leaves and if these remain, the plants gain and recruit, but if the leaves start underground and are cut off before coming to the light, these root stocks are drawn on again to furnish food to start more leaves and thus, in time, become exhausted.

POULTRY NOTES.

Hawks and crows are often troublesome in poultry flocks. Bushes, patches of corn, etc., or where necessary artificial protection such as frames, which afford a hiding place, will keep the hawks from the chicks and greatly reduce the damage that these troublesome birds are apt to perform.

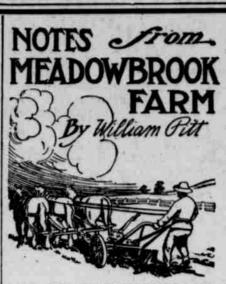
Young chicks will not do as well if compelled to pick their living with a bunch of old hens. Where possible they should be raised by themselves, but when this is not convenient a slatted enclosure which will not permit the old birds to enter will assist considerably in raising the young.

Green Food for Swine.

Swine should be fed plenty of green food in order to keep their digestive tract in the best of condition. It is better if they can be given a wide pasture rup, where they fences and cultivate to the gutters of the highway. can gather green forage for themselves. They should be supplied with plenty of pure cold water and an abundance of shade and a sanitary work thoroughly from year to year, wallowing place.

Unprofitable Cows.

There is but one cow to every five 18. Where hand labor is employed, persons in the United States and she supplies but two quarts of milk per easier to keep weeds down by raking day for them, according to the last or hoeing once a week than by going census. Evidently some cows are over the ground much less frequently. not producers of profit, but a means The habits of a weed determine to of loss.



Young orchards should be culti-

Peas put back the fertility that the orn takes out,

Keep the land constantly at work rowing some crop.

Head lice are the great drawback of chicks raised under hens.

Lima beans will require more mature than other beans or peas.

The tractor is going to be the newest and biggest help to the farmer.

The manure for peas, beets and onlons should be fine, rich and well

The hens need lime and the best way to furnish it is to feed crushed oyster shells.

A uniform quality of dairy products

whether it be milk, cream or butter, is always best. Melons of all kinds require an all. abundance of moisture and a clean,

deep mellow soil. Frequent watering of the teams during harvest is good insurance ing it up.

against sunstroke. made to produce in close quarters of city and suburban lots.

Manure as well as fertilizers should be thoroughly mixed in the soil be- fresh is much better than manure fore drilling in the seed.

Do you ever give your horse a cool bath in summer? You know how good it feels when you bathe.

Hungarian grass seed sown in rich, mellow soil will mature and be fit to cut 60 days from germination of seed.

scavenger by nature, but he certainly Dairying is the answer. thrives better on clean feed and decent surroundings.

Prepotency does not come by chance, but through years of pr themselves for creeping perennials, breeding for certain characteristics and specific functions.

> Many farmers do not have a supply of cabbage for winter because they the all-grain farmer as ever, neglect starting plants in midsummer for the fall crop.

be perfectly tight, and with excellent case the dairy business booms, wire fences that are now manufactured this is an easy matter.

The silo is almost indispensable to the really up-to-date dairy, but silage is the best form in which to feed corn to sheep or to beef cattle.

sold to the butcher. If she has it once | ter. it may be worse the second time.

The average ensilage ration is forty pounds per cow daily. This is seven and three-fifths tons per year. An acre will yield fifteen tons of silage.

Milk giving is a habit that responds function which may develop or diminish by the treatment accorded the cow.

When acorns are fed pigs their flesh is apt to become very soft and oily, but this difficulty may be overcome by feeding corn for three weeks before profitable dairy herd. slaughtering.

The Indian Runner ducks are not very good sitters, although they are often inclined to incubate. Their oggs are generally put into incubators or under hens for hatching.

There is no better feed for young also a good supplementary feed for brood sows, and, in fact, a good feed some other hardy vegetables. for hops of all kinds and ages,

without shelter except from rain until fall, then if you are so shiftless as to fall to provide shelter they are better able to stand cold and rain.

An excellent destroyer of lice is four ounces of powdered lobelia seed and two quarts of of boiling water. Let stand till cool and apply to the affected parts with a sponge or coarse brush. One application is usually sufficient.

pork saved from cholera is the rec- high-grade beef scrap, and pullets ord of the serum from one hog at the Missouri experiment station. More than 1,800 hogs were vaccinated with prepared to shell out eggs the year the serum. The hog was worth while in the world.

Oats make the best grain ration for horses in summer.

Cows differ somewhat in the amount of roughage they will take.

In the care of chickens women prove their superiority over men.

room women are more handy than men. Watch out for worms in the hock;

they will cause lots of trouble and

In preparing birds for the show

Feeding sour or sloppy food is one way of inviting bowel trouble in the young chick.

pea vine sllage.

to a paying business.

The farmer who keeps better poul-

vitality of the roots.

to the field and spread it. Impatience with the helfer that is freshening for the first time is one sure way of spoiling the cow.

Do not attempt to raise fall pigs without having first prepared a perfect system of housing for the winter.

Tomatoes should be given the last working with cultivator and then bedded just before the vines fall over.

water and it will save the horse much states. annoyance; but better not feed it at

world is corn, and the silo is the most state's wildest and most backward in economical device for use in dish- civilization and development. The cen-Free range for hogs does not mean

the highways and through the neighbors' fences. Stall manure applied to the ground

that has been weathered by standing in the barnyard. All vegetables which require warm

soil, as okra, beans, tomatoes and egg plant, should have warm manure and never muck. Farmers everywhere are looking for

some economical way of maintaining Some people claim that a hog is a the soil fertility or improving it. Fence corners full of dead weeds make a fine hibernating place for all

kinds of bugs which will get busy with your crop next spring. The alfalfa farmer is not cutting as

heavy a crop this year as ordinarily, but he is just as many laps ahead of

The man who is sincerely interested in his dairy work is pretty sure to

Stall manure, mixed with ground phosphate and applied on the ground fresh, is vastly better as a fertilizer than manure in any other form.

The cream from the milkings must not be kept so long that it will de-A ewe that is troubled with caked velop a sharp acid, for that would udder would better be fattened and impart an unpleasant flavor to the but-

> You would think the manufacturer a fool who would feed cotton into his mill and expect silk goods to be woven from it, and yet the hen is simply a

Try the plan of flushing the ewes from now until breeding season, then to encouragement or neglect. It is a follow with good pasture, and you will see from results that the plan makes most profits.

> what breeding does, of what feeding does, of what care and environment do, if we secure and maintain a

In order that a good horse may regood start in life, but should be kept in healthful and thrifty condition through the growing stage.

Cabbage will continue to grow late in the fall if the ground is clean and pigs than fresh skimmed milk. It is the surface fine and loose. The same is true of celew, beets, carrots and

Lines of breeding which a century Spring pigs can get along very well has developed and stamped with approval ought to prove safer than the theories of a single mind, made tangible in a few heterogeneous crosses.

> Turkeys are tough birds, that is, they will stand almost anything after they are grown up; but for some reason very many seem to have a world of trouble getting them grown

If the fowls are not allowed free Eight thousand dollars' worth of range add alfalfa meal and some will be grown that will be a surprise with their strong, long bodies, well round and breed strong chicks for next year's crop.

POPULATION CENTER

Indiana Professor Locates Exact Spot in Deep Gully.

Country's Hub Has Moved 31 Miles Northwest During Decade-Monument to Typify Westward and Northward Trend.

Bloomington, Ind.-The center of population of the United States as figured out by the bureau of census at Washington, is one of the wildest spots in Indiana. The center is about Opinions vary somewhat as yet as four and one-half miles south of Unto the comparative feeding value of lonville and seven miles east of Bloomington.

According to the census of 1900 the center was six miles southeast of Cotry, or the best, is on the right road lumbus, Ind., and thus, during the last 10 years it has moved seven-tenths of a mile north and approximately Asparagus shoots should not be cut 31 miles westward, more than twice too late, as late cutting will injure the the distance westward over the move ment of the preceding decade.

The westward movement of our The proper way to apply manure is population center during the past 120 to remove it from the stable directly years is shown as follows:

| Years is shown as follows:
| Census. | Yrs. Nearest Towns. | Miles. | 1790 23 mi. e. of Baltimore, Md. | 1800 18 mi. w. of Baltimore, Md. | 41 1810 40 mi. n. by w. of Washington | D. C. | 56 1820 16 mi. n. of Woodstock, Va. | 50 1830 19 mi. w. s. w. of Moorefield (now) | W. Va. | 1840 16 ml. s. of Clarksburg (now) | W. Va. | 1850 22 mi. s. e. of Parkersburg, W. Va. | 56 1850 20 mi. s. of Chilleothe. O. | 81 1870 41 mi. e. by n. of Clincinnati, O. | 42 1839 3 mi. w. by s. of Cincinnati, O. | 58 1890 20 mi. e. of Columbus, Ind. | 48 1990 6 mi. s. e. of Columbus, Ind. | 48 1990 6 mi. s. e. of Columbus, Ind. | 48 1990 7 mi. e. of Bloomington, Ind. | 33 The accelleration of the western movement is attributed to the growth

movement is attributed to the growth If dusty hay is fed, sprinkle with of the Pacific and Southwestern

Strange as it may seem, the center of such a large and important population comes very near being in Brown The greatest forage crop in the county, noted in Indiana as being the ter is just over the Brown county line, in one of the most inaccessible parts of Monroe county. Trees and Good poultry can be reared and that they should be allowed to run in underbrush are so thick that the sun seldom shines on the center and then only a part of the day, for the "cen-



Present Population Center.

Every inclosure for the hogs should be a prosperous dairyman and in his ter" is in a deep ravine, the banks of which are difficult to climb. As soon as the announcement was

made at Washington, Prof. William A. Cogshall, professor of astronomy in Indiana university, located in this city, began the work of establishing the center according to the figures given, in order that a monument may mark the spot, as has heretofore been done in Indiana, which state has been honored with the distinction of having the center of population within its confines since the census of 1890. Prof. Cogshall had a difficult trip

scribed it as follows: "With the data furnished I drove east of Bloomington six and one-half miles, nearly to the Brown county line. I found the neighborhood of the center to be in an unbroken second growth forest, The road up there is perhaps the worst in the state of Indiana. The center itself lies off about a half a mile from the road in a deep gully. It is covered with accord according to the covered with according to the c thick with brush for about two miles We need to have a clear idea of It is covered with second growth timber from twelve to fifteen feet high. The growth is so thick that it is almost impossible for a man to make his way through it. Before the center is definitely and finally fixed, it will be necessary to make a night sult the colt should not only be given trip to the place so that observations may be taken from the stars."

The ravine in which the center is located is typical of Monroe county and Brown county ravines and anyone who has hunted in a gully in this part of the state knows the difficulties to be overcome. Young trees are so close together that sometimes the hunter

can hardly squeeze through. The ravine containing the center is noted for game. Rabbits, squirrels and pheasants abound and at the same time rattlesnakes and spreading vipers are not scarce. In the spring the ra vines in this part of the county are aglow with the bloom of the red bud and the dogwood and birds sing and multiply undisturbed.

Canned Hymns at Funeral.

Carver, Mass.-Singing by phono graph at a funeral is the latest here At the funeral of Ralph U. Graffam & record containing one of the old-fash ioned church hymns was started or the machine. After prayers others were given, the record reproducing other favorite hymns sung at services over the dead. It was favorably com mented on as a practical substituts for the usual quartette.

HAD CAUGHT THEM.



He (after he had kissed her)-My! what's that noise back of us? She-I guess papa's trying his new motion picture machine.

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on his preliminary survey and de Make the Liver Do its Duty Nine times in ten when the liver is

right the stomach and bowels are right. CARTER'S LITTLE LIVER PILLS

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